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WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION)
CIRA CENTRE, 12TH FLOOR
2929 ARCH STREET
PHILADELPHIA, PA 19104-2891

EXAMINER	
ANYA, CHARLES E	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	**Application No.** 10/698,762	**Applicant(s)** MEHTA ET AL.	
	Examiner CHARLES E. ANYA	**Art Unit** 2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 November 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 5-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-3 and 5-34 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 2, 7, 17, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 2003/0093500 A1 to Khodabakchian et al. in view of U.S. 2005/0086297 A1 to Hinks.

3. As to claim 1, Khodabakchian teaches an asynchronous messaging architecture for processing messages, comprising:

a processor operatively coupled to a computer readable storage medium including computer executable instruction (figure 8 page 6 paragraphs 0070-0076) for:

executing an instance of an automated business process, the automated business process including response processing code ("…process…" page 1 paragraph 0017, page 3 paragraph 0035);

executing a program manager configured to manage the instance of the automated business process (Web Service Orchestration Server 102);

the program manager further configured to detect when the instance of the automated business process is waiting for a response to a message ("…suspended until a response…" page 1 paragraph 0017, figure 5 page 4 paragraph 0041), wherein a response indicates a success or failure of the message ("…suspended until a response…" page 1 paragraph 0017, page 3 paragraph 0035, Block 706 page 4 paragraph 0047);

the program manager further configured to store, when the instance is waiting for the response, at least a part of state information associated with the instance in a database and remove the instance from active memory ("...Passivation..." page 3 paragraph 0035, Block 510 page 4 paragraph 0041, "…passivates the states of the process…" page 4 paragraph 0041);

the program manager further configured to determine when the response associated with the instance has been received ("…When the response…is received…" page 3 paragraph 0035, Block 508 page 4 paragraph 0041) and the program manager further configured to restore the instance from the database into memory and pass the instance the message ("…the process is reactivated…" page 3 paragraph 0035, Block 514 page 4 paragraph 0041); and

the instance further configured to process the response using response processing code within the instance ("…Execution of the process…" page 3 paragraph 0035, Block 516 page 4 paragraph 0041).

Khodabakchian is silent with reference to the instance further configured to process the response using the exception handling code within the instance.

Hinks teaches the instance further configured to process the response using the exception handling code within the instance ("…catch block…" page 8 paragraph 0096).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Khodabakchian with the teaching of Hinks because the teaching of Hinks would improve the system of Khodabachian by providing a condition system with a mechanism for signaling and handling unusual conditions, including errors and warnings.

4. As to claim 2, Hinks teaches the architecture of claim 1, wherein the response processing code is a try-catch block ("…catch block…" page 8 paragraph 0096).

5. As to claim 7, Khodabakchian teaches a method for processing a message in an asynchronous architecture, comprising: determining that a response to a message sent by an instance (process) of software code is to be received (Block 508 page 4 paragraph 0041), wherein the response indicates a success or failure of the message (Block 706 page 4 paragraph 0047); determining whether the response has been received and, if the response has not been received, storing the instance of the software code in memory, thereby suspending the instance ("...Passivation..." page 3 paragraph 0035, Block 508 page 4 paragraph 0041, Block 510 page 4 paragraph 0041, "…passivates the states of the process…" page 4 paragraph 0041); receiving the response ("…When the response…is received…" page 3 paragraph 0035, Block 512 page 4 paragraph 0041) and resuming the instance ("…Execution of the process…"

page 3 paragraph 0035, Block 514 page 4 paragraph 0041); and processing the response using response processing code within the instance according to the success or failure of the message ("…Execution of the process…" page 3 paragraph 0035, Block 516 page 4 paragraph 0041).

Khodabakchian does not explicitly teach a response processing code within the instance having failure handling functionality.

Hinks teaches a response processing code within the instance having failure handling functionality ("…catch block…" page 8 paragraph 0096).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Khodabakchian with the teaching of Hinks because the teaching of Hinks would improve the system of Khodabachian by providing a condition system with a mechanism for signaling and handling unusual conditions, including errors and warnings.

6. As to claim 17, see the rejection of claims 1 and 2 above.

7. As to claim 21, see the rejection of claim 7 above

8. Claim Claims 1, 2, 5-10, 12-24 and 26-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 2003/0093500 A1 to Khodabakchian et al. in view of U.S. 2005/0027559 A1 to Rajan et al.

9. As to claim 1, Khodabakchian teaches an asynchronous messaging architecture for processing messages, comprising:

a processor operatively coupled to a computer readable storage medium including computer executable instruction (figure 8 page 6 paragraphs 0070-0076) for:

executing an instance of an automated business process, the automated business process including response processing code ("…process…" page 1 paragraph 0017, page 3 paragraph 0035);

executing a program manager configured to manage the instance of the automated business process (Web Service Orchestration Server 102);

the program manager further configured to detect when the instance of the automated business process is waiting for a response to a message ("…suspended until a response…" page 1 paragraph 0017, figure 5 page 4 paragraph 0041), wherein a response indicates a success or failure of the message ("…suspended until a response…" page 1 paragraph 0017, page 3 paragraph 0035, Block 706 page 4 paragraph 0047);

the program manager further configured to store, when the instance is waiting for the response, at least a part of state information associated with the instance in a database and remove the instance from active memory ("...Passivation..." page 3 paragraph 0035, Block 510 page 4 paragraph 0041, "…passivates the states of the process…" page 4 paragraph 0041);

the program manager further configured to determine when the response associated with the instance has been received ("…When the response…is received…"

page 3 paragraph 0035, Block 508 page 4 paragraph 0041) and the program manager further configured to restore the instance from the database into memory and pass the instance the message ("…the process is reactivated…" page 3 paragraph 0035, Block 514 page 4 paragraph 0041); and

the instance further configured to process the response using response processing code within the instance ("…Execution of the process…" page 3 paragraph 0035, Block 516 page 4 paragraph 0041).

Khodabakchian is silent with reference to the instance further configured to process the response using the exception handling code within the instance.

Rajan teaches the instance further configured to process the response using the exception handling code within the instance ("…error-handling…" page 8 paragraphs 0094-0096, "…try/catch blocks…" page 9 paragraph 0099).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Khodabakchian with the teaching of Rajan because the teaching of Rajan would improve the system of Khodabachian by providing a condition system with a mechanism for signaling and handling unusual conditions, including errors and warnings.

10. As to claim 2, Rajan teaches the architecture of claim 1, wherein the response processing code is a try-catch block ("…error-handling…" page 8 paragraphs 0094-0096, "…try/catch blocks…" page 9 paragraph 0099).

11. As to claim 5, Khodabakchian teaches the architecture of claim 1, wherein the response is received on a port defined by the instance (figure 5 page 4 paragraph 0041).

12. As to claim 6, Khodabakchian teaches the architecture of claim 1, wherein the response is a response indicative of whether or not the message was received by an intended recipient (figure 5 page 4 paragraph 0041).

13. As to claim 7, Khodabakchian teaches a method for processing a message in an asynchronous architecture, comprising: determining that a response to a message sent by an instance (process) of software code is to be received (Block 508 page 4 paragraph 0041), wherein the response indicates a success or failure of the message (Block 706 page 4 paragraph 0047); determining whether the response has been received and, if the response has not been received, storing the instance of the software code in memory, thereby suspending the instance ("...Passivation..." page 3 paragraph 0035, Block 508 page 4 paragraph 0041, Block 510 page 4 paragraph 0041, "…passivates the states of the process…" page 4 paragraph 0041); receiving the response (("…When the response…is received…" page 3 paragraph 0035, Block 512 page 4 paragraph 0041) and resuming the instance ("…Execution of the process…" page 3 paragraph 0035, Block 514 page 4 paragraph 0041); and processing the response using response processing code within the instance according to the success

or failure of the message ("…Execution of the process…" page 3 paragraph 0035, Block 516 page 4 paragraph 0041).

Khodabakchian does not explicitly teach a response processing code within the instance having failure handling functionality.

Rajan teaches a response processing code within the instance having failure handling functionality ("…error-handling…" page 8 paragraphs 0094-0096, "…try/catch blocks…" page 9 paragraph 0099).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Khodabakchian with the teaching of Rajan because the teaching of Rajan would improve the system of Khodabachian by providing a condition system with a mechanism for signaling and handling unusual conditions, including errors and warnings.

14. As to claims 8, 22 and 32, see the rejection of claim 2 above.

15. As to claim 9, Rajan teaches the method of claim 8, wherein processing the response comprises determining whether the response indicates a failure and, if so, processing the response using the catch block ("…error-handling…" page 8 paragraphs 0094-0096, "…try/catch blocks…" page 9 paragraph 0099).

16. As to claim 10, Khodabakchian teaches the method of claim 9, further comprising, if the response indicates a success, processing the response by way of the instance of the software code (Block 516 page 4 paragraph 0041).

17. As to claim 12, Khodabakchian teaches the method of claim 7, wherein storing the instance comprises storing the instance in a database and removing the instance from active memory ("…passivates the states of the process…using the stored data associated with the process…" page 3 paragraph 0035, page 4 paragraph 0041, page 6 paragraph 0068).

18. As to claim 13, Khodabakchian teaches the method of claim 12, wherein resuming the instance comprises removing the instance from the database and restoring the instance to active memory ("…passivates the states of the process…using the stored data associated with the process…" page 4 paragraph 0041, page 6 paragraph 0068).

19. As to claims 14 and 34, see the rejection of claim 5 above.

20. As to claim 15, Khodabachian teaches the method of claim 7, wherein the asynchronous architecture is implemented by way of distributed business process automation software (Web Services 104 page 2 paragraph 0020).

21. As to claim 16, Khodabachian teaches the method of claim 7, wherein the message is to be received by a remote computer (page 3 paragraph 0034).

22. As to claim 17, see the rejection of claims 1 and 2 above.

23. As to claims 18 and 23, see the rejection of claim 9 above.

24. As to claim 19, Khodabakchian teaches the method of claim 18, further comprising, if the response is indicative of a success, processing the response within the instance of the automation software and logically after the catch block (Block 516 page 4 paragraph 0041).

25. As to claim 20, see the rejection of claim 14 above.

26. As to claims 21 and 31, see the rejection of claims 1 and 7 above.

27. As to claims 24 and 33, see the rejection of claim 19 above.

28. As to claims 26-30, see the rejection of claims 12-16 respectively.

29. As to claim 34, see the rejection of claim 14 above.

30. Claims 3, 11 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 2003/0093500 A1 to Khodabakchian et al. in view of U.S. 2005/0027559 A1 to Rajan et al. as applied to claims 1,7 or 21 above, and further in view of U.S. Pub. No. 2002/0111996 A1 to Jones et al.

31. As to claim 3, Rajan and Khodabakchian are silent with reference to the architecture of claim 1, wherein storing the instance takes place after a predetermined time.

Jones teaches the architecture of claim 1, wherein storing the instance takes place after a predetermined time (page 2 paragraph 0020).

It would have been to one of ordinary skill in the art at the time the invention was made to modify the system of Rajan and Khodabakchian with the teaching of Hogg because the teaching of Hogg would improve the system of Rajan and Khodabakchian by providing a process for preserving system consistency in case of failure.

32. As to claims 11 and 25, see the rejection of claim 3 above.

Response to Arguments

Applicant's arguments filed 11/6/08 have been fully considered but they are not persuasive.

Applicant argues in substance that both Hinks and Rajan prior arts do not teach "instance further configured to process the response using the response processing code and handle exceptions using the exception handling code within the instance”.

The Hinks prior art discloses a message routing system that includes client computers, web services, a business process engine, and an integration service network. A client computer sends and receives messages including business process instructions and data to be processed by business processes. The business process engine receives the message including the business process instructions from one of the client computers, and instantiates a business process in accordance with the received business process instructions and passes the received data to at least one web service. **The business process engine and business process also obtain responses from the web service, aggregating responses received from the web service, and passing the aggregated response to the client computer**.

The client computer sending the message may want to be alerted to any failures synchronously and be given the opportunity to re-send the message. **To identify and handle any of the failures during the instantiation of the business process, fault catchers (try and catch blocks) are provided by the business process engine to send email to the initiating service synchronously.**

Therefore, contrary to Applicant’s assertion the business process engine of the Hinks prior art processes a response for the message received from the client computer.

Secondly, the fault catchers are provided for the varying messages in the business process engine and allow the business process engine to send emails containing a retry link to the client computer **synchronously**. Messages (Invocations /method calls) are either sent synchronously or asynchronously. Synchronous messages block until they complete implying that the instance sending the messages would wait until a response is received.

The Rajan prior art discloses a method for developing an enterprise application system having one or more tiers. The one or more tiers includes a business framework, a database framework that is operative with the business framework, a client framework that is operative with the business framework, and an external framework that is operative with the business framework. The various frameworks can work together in distinct combinations of one or more frameworks for specific applications. The enterprise system framework can also provides many services on business objects including error handling services. The error handling services support the capturing of operating system exceptions or communication applications (e.g., COM/COM+) errors. The providing of error handling services includes invoking business objects synchronously. The synchronous invocation/method call is wrapped in a special “try/catch block” which ensures that the error is passed all the way back to the user synchronously.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 6,804,818 B1 issued to Codella et al.: directed to integration mechanism for object-oriented software and message-oriented software.

U.S. Pub. No. 2002/0156664 A1 to Willcox et al.: directed to a method for service request handling.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES E. ANYA whose telephone number is (571)272-3757. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Meng-Ai A can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)? If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

cea.

/Li B. Zhen/
Primary Examiner, Art Unit 2194